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**ISSUE PRIORITY GROUPING THREE
SHIPMENT CONSOLIDATION
EFFECTIVENESS MODEL**

MAY 1989

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DEPARTMENT OF DEFENSE

DEFENSE
LOGISTICS
AGENCY

ISSUE PRIORITY GROUPING THREE SHIPMENT CONSOLIDATION EFFECTIVENESS MODEL

MAY 1989

Camden Station,
Alexandria, Virginia 22304-610

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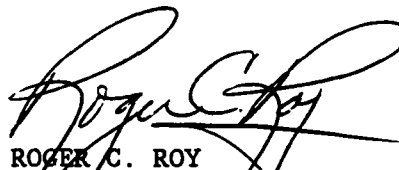
DLA-LO

FOREWORD

This report summarizes the work done and conclusions reached in a study of depot low priority shipment consolidation effectiveness. The analysis was performed by the Operations Research and Economic Analysis Management Support Office for the Directorate of Supply Operations, Transportation Division.

IPG III requisitions for compatible items and with the same destinations are consolidated to make maximum use of transportation and warehousing funds. This process is highly automated but frequently the oldest requisition is removed from the shipment data bank before the routine drop date. The resulting consolidation is thus smaller than it would have been under ideal conditions.

The model constructed for this study emulates the consolidation process. The optimization of the consolidation process assumes a perfect system but can still be a useful tool in determining effectiveness trends at DLA supply depots. For a typical depot in a 45 day period this model shows that under optimal conditions, small parcel shipments could be reduced in excess of 63 percent.


ROGER C. ROY
Assistant Director
Policy and Plans

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I. INTRODUCTION. In a letter dated 8 September 1986, Defense Logistics Agency's Directorate of Supply Operations, Transportation Division (DLA-OT) requested that DLA Operations Research and Economic Analysis Office (DLA-LO) analyze the effectiveness of our depots in processing Issue Priority Grouping (IPG) III Material Release Orders (MROs). Part I (Depot Effectiveness IPG III Processing) of this analysis was completed in July 1987 and analyzed the effectiveness of DLA's depots in processing IPG III MROs and the economic viability of DLA's 98 percent on-time goal for this priority. Part II consisted of developing a model to measure depot IPG III shipment consolidation effectiveness.

A. Background

Requisitions are received at a depot, when the information is transmitted to the Mechanization of Warehousing and Shipment Processing (MOWASP) System by the DLA Supply Center. IPG III requisitions are allowed a specific amount of time to reach the customer. Therefore, IPG III requisitions for compatible items and same location can be consolidated into one shipment.

The consolidation process begins with the receipt of an MRO at a depot. A Mandatory Date to Transportation (MDT) is assigned to each MRO which reflects the longest period of time for shipment to meet delivery requirements to the consignee within the Uniform Materiel Movement and Issue Priority System (UMMIPS) timeframe. The MRO may be held in the bank until the Document Release Date (DRD) (MDT less depot processing and transportation hold times) is achieved, but generally it is dropped earlier than the date to satisfy workload requirements. All incoming IPG III MROs are placed into the MOWASP system and segregated into a computer bank or repository by geographic distribution area. Each depot designates its own geographic regions. The consolidation process occurs when all MROs to a given DoDAAC, freight destination (DCR), or geographical region are pulled from the bank. The MROs sharing specific characteristics (e.g. same DoDAAC, compatible warehouse locations and various shipping compatibility factors, level of hazard; temperature control, etc.). A shipping unit can apply to either a freight and small parcel shipment consolidation or just a small parcel consolidation. A Transportation Unit is the consolidated shipment tendered the carrier; it can be composed of a single, or multiple, shipment unit.

When the oldest requisitions in a geographical area's bank begin physical processing to reach the customer on time, all of that area's or customer's shipping units are identified and listed on a computer printout. As a shipping unit drops from the bank, it queues for processing at the appropriate warehouse in IPG sequence. The warehouse is allowed one to three days (each depot fixes its own standard) to "pick and pack" the shipping unit lines together (in boxes or on pallets) as a shipping unit. Once shipping unit lines are packed into a shipping unit, transportation has two days to send the shipping unit on its way to the customer, either via a small parcel mode or as a freight shipment under a consolidated Government Bill of Lading (GBL), depending on the weight and cube.

B. Problem Statement. Develop a model to measure depot IPG III shipment consolidation effectiveness. Sometimes the oldest requisition is removed from the bank before the scheduled DRD. The resulting consolidation is thus smaller than it should be under ideal conditions.

C. Objectives

1. For each DLA depot, measure the number of shipping units built, the number of small parcel shipments, and the number of transportation units built.

2. For each DLA depot, determine the optimal number of small parcel shipments and the optimal number of transportation units which could have been built.

D. Scope

1. In accordance with the client, the data base will consist of a period of 45 days to be selected anytime during the past twelve months.

2. Only CONUS shipments will be considered.

3. Eliminate single line shipments for which truckload minimum weights have been achieved.

4. Shipments with incompatible cargo codes and special requirements codes will not be considered.

5. The model does not consider freight cost savings. For freight cost savings to be computed, a guaranteed traffic rate data base would have to be constructed. Rates from all depots to all destinations are frequently changed by carrier performance so the cost and time of constructing this data base would be prohibitive.

6. The model does consider small parcel cost savings. These savings calculations are detailed in Appendix B. If the figures at Defense Depot Tracy, California for the sample forty-five day period are extended to the other six DLA depots, savings of \$4,828,131 are conceivable. Small parcel Mode 9 (Overseas) shipments were not costed out.

II. CONCLUSIONS AND RECOMMENDATION

A. Conclusions Drawn From the Model

Under optimal conditions, small parcel shipments can be reduced thus realizing significant cost savings.

Reliance on Mode A Truckload (TL) shipments would increase, while both Less-Than-Truckload (LTL) and small parcel shipments would decrease substantially.

Using the results from this model, transportation managers will be able to quickly determine the efficiency level of their consolidation effort.

It is estimated that it will take one man-month to make adjustments and to run the model for all six DLA depots for one period of time.

B. Recommendation. This model should be used to determine consolidation efficiency trends at DLA depots. The results obtained from this model should be weighed against the number and significance of the assumptions made. Individual depots will now be able to compare consolidation performance against an ideal measure. Headquarters staff personnel will be able to track the performance of each of the DLA depots and suggest areas of possible improvement.

III. DATA DEVELOPMENT. The analysis methodology requires two types of data about the system being modeled: MRO data and bank times.

A. Depot MRO History Records

DLA retains a computer record of every MRO successfully processed and delivered to a military customer. Each customer is identified by its own account number, the Department of Defense Activity Address Code (DODAAC) and by its central delivery point, the Destination Cross-Reference Code (DCR). Detailed inspection of the records pertinent to the analysis revealed many different types of MROs and substantial diversity among types. The requisitions differed greatly in volume, weight, item type, and frequency of demand; furthermore, over 4700 separate central delivery points, DCRs, received material from the six DLA depots, with the total weight received by individual DCRs ranging from a few pounds to millions of pounds a year.

For the forty-five days selected, the model matches each MRO by National Item Identification Number (NIIN) to a separate stock number file to look up the corresponding special requirements code, cargo code, and hazardous storage compatibility code. The hazardous storage code is used to eliminate radioactive items from the input MROs.

Other conditions are required for an MRO record to be selected. Specifically, the MRO records selected for analysis were those which showed:

1. IPG - 3. MROs from IPG I and IPG II were not used as inputs.
2. DODAAC. The first position of this code indicated if the activity was Foreign Military Sales (FMS) or not. FMS shipments were specifically excluded.
3. CONUS Parcel Post Zone has a value of 1 through 8. CONUS shipments are numbered 1-8, overseas shipments are given a value of 9.

4. Nonzero weight. An entity must have weight to have meaning in the model. Because some MRO quantities are "rolled up" to the lead MRO in a transportation unit, the weight on a selected record may not always be attributable to the NIIN on the record; however, the resulting compatibility codes are representative of the items accounting for the weight, and the other information is accurate.

5. Mode - A (Truckload), B (Less Than Truckload), G (Surface Parcel Post), or 5 (United Parcel Service). Material shipped by any other mode is rarely evaluated in IPG III on-time performance.

6. Geographic Area Code in range A- Z. Each depot can also assign codes in range 0 - 9, but these are often reserved for unusual (e.g. - disposal shipments) or overseas shipments.

7. Matchable NIIN. Needed for consolidation criteria. Rare MROs show blanks or non-MOWASP items in this field.

8. Document Identifier Code not equal to "A5J". This value indicates a property disposal shipment.

9. Hazardous Storage Compatibility Code not equal to "A1". This value indicates radioactive items.

B. Bank Times. The duration of the bank cycle is based on the day of the week and the estimated shipping time for the distribution area. The model uses the depot and area to locate this information in a data table.

IV. SIMULATION MODEL

A. System Description: The MRO Process

DLA Supply Centers (DSCs) transmit military supply requests to depots as MROs, where each MRO represents some quantity of only one type of item. Each requisition is identified by the customer's DODAAC. The MROs are also distinguished by Issue Priority Group. Those MROs which are IPG I or IPG II are separated from the IPG III MROs because they have shorter delivery suspenses and will rarely combine with the latter for shipment.

Each IPG III MRO arriving at a depot is stored in a computer "bank" for its distribution area and its corresponding DCR. It is combined into a shipping unit with other MROs from the same DODAAC when certain compatibility criteria are met. A MRO is then identified by shipping unit number and its own line number for that shipping unit. When the oldest MROs in an area's bank must begin physical processing at a warehouse in order to reach the customer on time, some or all of the area's shipping units are "dropped" from the computer.

When a shipping unit drops from the bank, it queues for processing at the appropriate warehouse behind higher priority IPG I and IPG II MROs. The warehouse is allowed typically one to three days to "pick" the material on each line from its storage location, pack the lines together (in boxes or on pallets) as the shipping unit, and send it to the freight or small parcel terminal for shipping. If designated for freight, a shipping unit will be held at the terminal for consolidation with other units destined for the same destination and loaded on a truck to leave on a predetermined day. The total time at the freight terminal is usually between 24 and 48 hours.

The process of satisfying IPG III MRO demand differs from depot to depot because each depot processes a unique set of MROs and employs different resources to perform its mission. The number of supply warehouses and the physical layout of each depot is different, as is the degree of use of automated conveyors, forklifts, and various packing devices. Furthermore, the unique geographic relationship of each depot to its customers has led depot managers to divide the country differently into distribution areas for planning, banking and transportation purposes.

Despite these differences, each depot behaves according to the uniform Mechanization of Warehousing And Shipping Procedures (MOWASP). This set of regulations describes detailed policies and procedures for processing MROs the same way at all depots. Therefore, while the depots may employ different internal means for certain tasks, all six depots do conform to a general system.

B. Model Development Approach

1. Extract records from the MRO history file and match them with the NSN file for the period to be covered for a DLA depot.

2. Delete all records that are not complete, delete records indicating more than one shipment, and delete records of items that cannot be combined into one shipment.

3. Sort the DLA file by geographical area, DCR, cargo code, special requirements code, and depot receipt date.

4. Construct FORTRAN model for mainframe application to consolidate requisitions into shipments.

5. From the same trimmed file, count the number of shipments actually built and the number of shipment.. built under optimal circumstances. These "optimal" conditions are described in the next section.

C. Model Features and Assumptions

1. General Model Concept. The MRO process can be described as the flow of entities (lines or shipping units through a network of queues, branching nodes, and service activities). This network consists of four different processes: arrival, banking, processing and transportation. Each MRO passes sequentially through the four processes by itself or as part of a larger unit, or entity.

2. MRO Arrivals. An entity is created each time an MRO record is read from the input file.

3. Shipping Unit Processing

The picking and packing operations at a depot are complex and labor-intensive, and differ greatly between depots and between warehouses at a depot. The details of warehousing were not critical to estimation of the analysis measures of comparison. The chief modeling needs in this area were to create an appropriate delay between the time a shipping unit drops for processing and the time it is shipped, and to route processed shipping units to the correct transportation terminal (freight or small parcel).

The shipping unit's processing time is assumed to be independent of the number of lines and the other shipping units being processed. Perfect supply is assumed: any shipping unit dropped will be successfully picked, packed and delivered to transportation.

V. SIMULATION RESULTS

A. The data chosen for verification of the model was taken from Defense Depot, Tracy California for the period 14 February 1988 to 31 March 1988. The depot and time period were randomly selected. Model output is summarized in Table 1.

Table 1

SUMMARY OF MODEL OUTPUT (SHIPPING UNITS)

	<u>Actual</u>	<u>Optimized</u>
Total Freight Shipping Units	19,286	4,112
Total Small Parcel Shipping Units	<u>27,726</u>	<u>13,099</u>
Total Shipping Units	47,012	17,211*

* indicates an improvement of 63%

B. The model assumes perfect supply, that is no human or mechanical errors throughout the consolidation process. The consolidation performance is undoubtedly high in each case because actual warehouses will occasionally process an item too late for shipment in the intended cycle, but this is not permitted in the model. The optimized model will not drop records. Thus the optimized model will process more weight than what actually occurs. We expect the optimized system to move more freight in fewer shipments. The output merely reinforces this outcome.

C. These examples merely confirm that the model's output is useful only if interpreted in light of the model's assumptions. In general, the model assumed that all depots performed near a theoretical optimal level of efficiency for the particular time standard.

D. Appendix B is a listing of a small portion of output from this model. It covers Geographic Areas A and B only and is included for illustration purposes.

APPENDIX A

Model Code

REQUESTED OPTIONS (EXECUTE): NOTF, NODECK, NOLIST, OPT(O)

OPTIONS IN EFFECT: NOLIST NOMAP NOXREF NOGOSTMT NODECK SOURCE TERM OBJECT FIXED NOTEST NOTRMFLG SRCFLG NOSYM
OPT(O) LANGVL(77) NOFIPS FLAG(1) NAME(MAIN) LINECOUNT(60) CHARLEN(500) SDUMP

```

*.....1.....2.....3.....4.....5.....6.....7.....8
1  INTEGER RECDTE, PP, FR, MDATE(10000)
2  REAL WT, PWGT(10000), FWGT(10000)
3  CHARACTER*1 GA, CC, SRC
4  CHARACTER*2 DEPOT
5  CHARACTER*6 DCR, PAREA(10000,5), FAREA(10000,5), DODAC

C READ TYPE OF DEPOT AND BANK TIMES FOR GEOGRAPHICAL AREAS
C
6  READ (11,1010) DEPOT, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL,
   $ KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ,
   $ K1, K2, K3, K4, K5, K6, K7, K8, K9
7  1010 FORMAT (A2,35I2)

C READ RECORDS, ONE AT A TIME, COPY ALL RECORDS FOR GA A TO FILE IO
C
8  100 CONTINUE
9  READ(9,1000,END=200)GA,DCR,DODAC,CC,SRC,RECDTE,WT
10 1000 FORMAT (A,2X,A6,1X,A6,2(1X,A),1X,I3,1X,F9.3)
11 IF (GA.EQ.'A') THEN
12   KTR=KTR+1
13   WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
14   1001 FORMAT (A,2X,A6,1X,A6,2(1X,A),1X,I3,1X,F9.3)
15 END IF
16 GO TO 100
17 200 CONTINUE
18 REWIND 10

C CALL THREE SUBROUTINES TO: 1. CONSOLIDATE SMALL PARCEL SHIPPING
C UNITS AND FREIGHT SHIPPING UNITS. 2. CONSOLIDATE SMALL PARCEL
C SHIPPING UNITS BY DODAC. 3. WRITE FREIGHT SHIPPING UNITS TO
C AN EXTERNAL FILE FOR FURTHER CONSOLIDATION.
C
19 IF (KTR.GT.0) THEN
20   CALL SUN(PP,PAREA,PWGT,KA,FR,FAREA,FWGT,MDATE)
21   CALL PSHIP(PP,PAREA,PWGT,DEPOT)
22   CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
23   KTR=0
24 END IF
25 REWIND 9

C REPEAT THE SAME PROCESS FOR GEOGRAPHICAL AREA B, ETC.
C
26 101 CONTINUE
27 READ(9,1000,END=201)GA,DCR,DODAC,CC,SRC,RECDTE,WT
28 IF (GA.EQ.'B') THEN
29   KTR=KTR+1
30   WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
31 END IF
32 GO TO 101
33 201 CONTINUE
34 REWIND 10

```

```
*.....1.....2.....3.....4.....5.....6.....7.....8
35 IF (KTR.GT.O) THEN
36 CALL SUN(PP,PAREA,PWGT,KB,FR,FAREA,FWGT,MDATE)
37 CALL PSHIP(PP,PAREA,PWGT,DEPOT)
38 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
39 KTR=O
40 END IF
41 REWIND 9
42 CONTINUE
43 READ(9,1000,END=202)GA,DCR,DODAC,CC,SRC,RECOTE,WT
44 IF (GA.EQ.'C') THEN
45 KTR=KTR+1
46 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
47 END IF
48 GO TO 102
49 CONTINUE
50 REWIND 10
51 IF (KTR.GT.O) THEN
52 CALL SUN(PP,PAREA,PWGT,KC,FR,FAREA,FWGT,MDATE)
53 CALL PSHIP(PP,PAREA,PWGT,DEPOT)
54 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
55 KTR=O
56 END IF
57 REWIND 9
58 CONTINUE
59 READ(9,1000,END=203)GA,DCR,DODAC,CC,SRC,RECOTE,WT
60 IF (GA.EQ.'D') THEN
61 KTR=KTR+1
62 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
63 END IF
64 GO TO 103
65 CONTINUE
66 REWIND 10
67 IF (KTR.GT.O) THEN
68 CALL SUN(PP,PAREA,PWGT,KD,FR,FAREA,FWGT,MDATE)
69 CALL PSHIP(PP,PAREA,PWGT,DEPOT)
70 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
71 KTR=O
72 END IF
73 REWIND 9
74 CONTINUE
75 READ(9,1000,END=204)GA,DCR,DODAC,CC,SRC,RECOTE,WT
76 IF (GA.EQ.'E') THEN
77 KTR=KTR+1
78 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
79 END IF
80 GO TO 104
81 CONTINUE
82 REWIND 10
83 IF (KTR.GT.O) THEN
84 CALL SUN(PP,PAREA,PWGT,KE,FR,FAREA,FWGT,MDATE)
85 CALL PSHIP(PP,PAREA,PWGT,DEPOT)
86 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
87 KTR=O
88 END IF
89 REWIND 9
90 CONTINUE
```



```
*.....1.....2.....3.....4.....5.....6.....7.....8
91 READ(9,1000,END=205)GA,DCR,DODAC,CC,SRC,RECDTE,WT
92 IF (GA.EQ.'F') THEN
93   KTR=KTR+1
94   WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
95   END IF
96   GO TO 105
97   205 CONTINUE
98   REVIND 10
99   IF (KTR.GT.0) THEN
100     CALL SUN(PP,PAREA,PWGT,KF,FR,FAREA,FWGT,MDATE)
101     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
102     CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
103     KTR=0
104   END IF
105   REVIND 9
106   106 CONTINUE
107 READ(9,1000,END=206)GA,DCR,DODAC,CC,SRC,RECDTE,WT
108 IF (GA.EQ.'G') THEN
109   KTR=KTR+1
110   WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
111   END IF
112   GO TO 106
113   206 CONTINUE
114   REVIND 10
115   IF (KTR.GT.0) THEN
116     CALL SUN(PP,PAREA,PWGT,KG,FR,FAREA,FWGT,MDATE)
117     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
118     CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
119     KTR=0
120   END IF
121   REVIND 9
122   107 CONTINUE
123 READ(9,1000,END=207)GA,DCR,DODAC,CC,SRC,RECDTE,WT
124 IF (GA.EQ.'H') THEN
125   KTR=KTR+1
126   WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
127   END IF
128   GO TO 107
129   207 CONTINUE
130   REVIND 10
131   IF (KTR.GT.0) THEN
132     CALL SUN(PP,PAREA,PWGT,KH,FR,FAREA,FWGT,MDATE)
133     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
134     CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
135     KTR=0
136   END IF
137   REVIND 9
138   108 CONTINUE
139 READ(9,1000,END=208)GA,DCR,DODAC,CC,SRC,RECDTE,WT
140 IF (GA.EQ.'I') THEN
141   KTR=KTR+1
142   WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
143   END IF
144   GO TO 108
145   208 CONTINUE
146   REVIND 10
```

01080061
01090061
01100061
01110061
01120061
01130061
01140061
01150061
01160061
01170061
01180061
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01200061
01210061
01220061
01230061
01240061
01250061
01260061
01270061
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01560061
01570061
01580061
01590061
01600061
01610061
01620061
01630061

4-7

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* ..... 1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 ..... 7 ..... 8
147 IF (KTR.GT.O) THEN
148 CALL SUN(PP,PAREA,PWGT,KI,FR,FAREA,FWGT,MDATE)
149 CALL PSHIP(PP,PAREA,PWGT,DEPOT)
150 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
151 KTR=O
152 END IF
153 REWIND 9
154 108 CONTINUE
155 READ(9,1000,END=209)GA,DCR,DODAC,CC,SRC,RECOTE,WT
156 IF (GA.EQ.'J') THEN
157 KTR=KTR+1
158 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
159 END IF
160 GO TO 109
161 209 CONTINUE
162 REWIND 10
163 IF (KTR.GT.O) THEN
164 CALL SUN(PP,PAREA,PWGT,KJ,FR,FAREA,FWGT,MDATE)
165 CALL PSHIP(PP,PAREA,PWGT,DEPOT)
166 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
167 KTR=O
168 END IF
169 REWIND 9
170 110 CONTINUE
171 READ(9,1000,END=210)GA,DCR,DODAC,CC,SRC,RECOTE,WT
172 IF (GA.EQ.'K') THEN
173 KTR=KTR+1
174 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
175 END IF
176 GO TO 110
177 210 CONTINUE
178 REWIND 10
179 IF (KTR.GT.O) THEN
180 CALL SUN(PP,PAREA,PWGT,KK,FR,FAREA,FWGT,MDATE)
181 CALL PSHIP(PP,PAREA,PWGT,DEPOT)
182 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
183 KTR=O
184 END IF
185 REWIND 9
186 111 CONTINUE
187 READ(9,1000,END=211)GA,DCR,DODAC,CC,SRC,RECOTE,WT
188 IF (GA.EQ.'L') THEN
189 KTR=KTR+1
190 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
191 END IF
192 GO TO 111
193 211 CONTINUE
194 REWIND 10
195 IF (KTR.GT.O) THEN
196 CALL SUN(PP,PAREA,PWGT,KL,FR,FAREA,FWGT,MDATE)
197 CALL PSHIP(PP,PAREA,PWGT,DEPOT)
198 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
199 KTR=O
200 END IF
201 REWIND 9
202 112 CONTINUE
```

01640061
01650061
01660061
01670061
01680061
01690061
01700061
01710061
01720061
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02110061
02120061
02130061
02140061
02150061
02160061
02170061
02180061
02190061

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*.....1.....2.....3.....4.....5.....6.....7.....8
203 ISN READ(9,1000,END=212)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02200061
204 ISN IF (GA.EQ.'N') THEN 02210061
205 ISN KTR=KTR+1 02220061
206 ISN WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02230061
207 ISN END IF 02240061
208 ISN GO TO 112 02250061
209 ISN 212 CONTINUE 02260061
210 ISN REWIND 10 02270061
211 ISN IF (KTR.GT.O) THEN 02280061
212 ISN CALL SUN(PP,PAREA,PWGT,KM,FR,FAREA,FWGT,MDATE) 02290061
213 ISN CALL PSHIP(PP,PAREA,PWGT,DEPOT) 02300061
214 ISN CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 02310061
215 ISN KTR=O 02320061
216 ISN END IF 02330061
217 ISN REWIND 9 02340061
218 ISN 113 CONTINUE 02350061
219 ISN READ(9,1000,END=213)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02360061
220 ISN IF (GA.EQ.'N') THEN 02370061
221 ISN KTR=KTR+1 02380061
222 ISN WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02390061
223 ISN END IF 02400061
224 ISN GO TO 113 02410061
225 ISN 213 CONTINUE 02420061
226 ISN REWIND 10 02430061
227 ISN IF (KTR.GT.O) THEN 02440061
228 ISN CALL SUN(PP,PAREA,PWGT,KM,FR,FAREA,FWGT,MDATE) 02450061
229 ISN CALL PSHIP(PP,PAREA,PWGT,DEPOT) 02460061
230 ISN CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 02470061
231 ISN KTR=O 02480061
232 ISN END IF 02490061
233 ISN REWIND 9 02500061
234 ISN 114 CONTINUE 02510061
235 ISN READ(9,1000,END=214)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02520061
236 ISN IF (GA.EQ.'O') THEN 02530061
237 ISN KTR=KTR+1 02540061
238 ISN WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02550061
239 ISN END IF 02560061
240 ISN GO TO 114 02570061
241 ISN 214 CONTINUE 02580061
242 ISN REWIND 10 02590061
243 ISN IF (KTR.GT.O) THEN 02600061
244 ISN CALL SUN(PP,PAREA,PWGT,KM,FR,FAREA,FWGT,MDATE) 02610061
245 ISN CALL PSHIP(PP,PAREA,PWGT,DEPOT) 02620061
246 ISN CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 02630061
247 ISN KTR=O 02640061
248 ISN END IF 02650061
249 ISN REWIND 9 02660061
250 ISN 115 CONTINUE 02670061
251 ISN READ(9,1000,END=215)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02680061
252 ISN IF (GA.EQ.'P') THEN 02690061
253 ISN KTR=KTR+1 02700061
254 ISN WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02710061
255 ISN END IF 02720061
256 ISN GO TO 115 02730061
257 ISN 215 CONTINUE 02740061
258 ISN REWIND 10 02750061

```

```
* ..... 1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 ..... 7 ..... 8
159 IF (KTR.GT.0) THEN
160   CALL SUN(PP,PAREA,PWGT,KP,FR,FAREA,FWGT,MDATE)
161   CALL PSHIP(PP,PAREA,PWGT,DEPOT)
162   CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
163   KTR=0
164   END IF
165   REWIND 9
166   116 CONTINUE
167   READ(9,1000,END=216)GA,DCR,DODAC,CC,SRC,RECOTE,WT
168   IF (GA.EQ.'0') THEN
169     KTR=KTR+1
170     WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
171     END IF
172     GO TO 116
173   216 CONTINUE
174   REWIND 10
175   IF (KTR.GT.0) THEN
176     CALL SUN(PP,PAREA,PWGT,KQ,FR,FAREA,FWGT,MDATE)
177     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
178     CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
179     KTR=0
180     END IF
181     REWIND 9
182     117 CONTINUE
183     READ(9,1000,END=217)GA,DCR,DODAC,CC,SRC,RECOTE,WT
184     IF (GA.EQ.'R') THEN
185       KTR=KTR+1
186       WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
187       END IF
188       GO TO 117
189     217 CONTINUE
190     REWIND 10
191     IF (KTR.GT.0) THEN
192       CALL SUN(PP,PAREA,PWGT,KR,FR,FAREA,FWGT,MDATE)
193       CALL PSHIP(PP,PAREA,PWGT,DEPOT)
194       CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
195       KTR=0
196       END IF
197       REWIND 9
198       118 CONTINUE
199       READ(9,1000,END=218)GA,DCR,DODAC,CC,SRC,RECOTE,WT
200       IF (GA.EQ.'S') THEN
201         KTR=KTR+1
202         WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
203         END IF
204         GO TO 118
205       218 CONTINUE
206       REWIND 10
207       IF (KTR.GT.0) THEN
208         CALL SUN(PP,PAREA,PWGT,KS,FR,FAREA,FWGT,MDATE)
209         CALL PSHIP(PP,PAREA,PWGT,DEPOT)
210         CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
211         KTR=0
212         END IF
213         REWIND 9
214         119 CONTINUE
```

```

*.....1.....2.....3.....4.....5.....6.....7.....8
118 ISN READ(9,1000,END=219)GA,DCR,DODAC,CC,SRC,RECOTE,WT
119 ISN IF (GA.EQ.'T') THEN
120 ISN KTR=KTR+1
121 ISN WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
122 ISN END IF
123 ISN GO TO 118
124 ISN 219 CONTINUE
125 ISN REWIND 10
126 ISN IF (KTR.GT.0) THEN
127 ISN CALL SUN(PP,PAREA,PWGT,KT,FR,FAREA,FWGT,MDATE)
128 ISN CALL PSHIP(PP,PAREA,PWGT,DEPOT)
129 ISN CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
130 ISN KTR=0
131 ISN END IF
132 ISN REWIND 9
133 ISN 120 CONTINUE
134 ISN READ(9,1000,END=220)GA,DCR,DODAC,CC,SRC,RECOTE,WT
135 ISN IF (GA.EQ.'U') THEN
136 ISN KTR=KTR+1
137 ISN WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
138 ISN END IF
139 ISN GO TO 120
140 ISN 220 CONTINUE
141 ISN REWIND 10
142 ISN IF (KTR.GT.0) THEN
143 ISN CALL SUN(PP,PAREA,PWGT,KU,FR,FAREA,FWGT,MDATE)
144 ISN CALL PSHIP(PP,PAREA,PWGT,DEPOT)
145 ISN CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
146 ISN KTR=0
147 ISN END IF
148 ISN REWIND 9
149 ISN 121 CONTINUE
150 ISN READ(9,1000,END=221)GA,DCR,DODAC,CC,SRC,RECOTE,WT
151 ISN IF (GA.EQ.'V') THEN
152 ISN KTR=KTR+1
153 ISN WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
154 ISN END IF
155 ISN GO TO 121
156 ISN 221 CONTINUE
157 ISN REWIND 10
158 ISN IF (KTR.GT.0) THEN
159 ISN CALL SUN(PP,PAREA,PWGT,KV,FR,FAREA,FWGT,MDATE)
160 ISN CALL PSHIP(PP,PAREA,PWGT,DEPOT)
161 ISN CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
162 ISN KTR=0
163 ISN END IF
164 ISN REWIND 9
165 ISN 122 CONTINUE
166 ISN READ(9,1000,END=222)GA,DCR,DODAC,CC,SRC,RECOTE,WT
167 ISN IF (GA.EQ.'W') THEN
168 ISN KTR=KTR+1
169 ISN WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT
170 ISN END IF
171 ISN GO TO 122
172 ISN 222 CONTINUE
173 ISN REWIND 10

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* .....1 .....2 .....3 .....4 .....5 .....6 .....7 .....8
1SN 371 IF (KTR.GT.O) THEN 0380061
1SN 372 CALL SUN(PP,PAREA,PWGT,KV,FR,FAREA,FWGT,MDATE) 03890061
1SN 373 CALL PSHIP(PP,PAREA,PWGT,DEPOT) 03900061
1SN 374 CALL FSHIP(FR,FAREA,PWGT,MDATE,DEPOT) 03910061
1SN 375 KTR=O 03920061
1SN 376 END IF 03930061
1SN 377 REWIND 9 03940061
1SN 378 123 CONTINUE 03950061
1SN 379 READ(9,1000,END=223)GA,DCR,DODAC,CC,SRC,RECDTE,WT 03960061
1SN 380 IF (GA.EQ.'X') THEN 03970061
1SN 381 KTR=KTR+1 03980061
1SN 382 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 03990061
1SN 383 END IF 04000061
1SN 384 GO TO 123 04010061
1SN 385 223 CONTINUE 04020061
1SN 386 REWIND 10 04030061
1SN 387 IF (KTR.GT.O) THEN 04040061
1SN 388 CALL SUN(PP,PAREA,PWGT,KV,FR,FAREA,FWGT,MDATE) 04050061
1SN 389 CALL PSHIP(PP,PAREA,PWGT,DEPOT) 04060061
1SN 390 CALL FSHIP(FR,FAREA,PWGT,MDATE,DEPOT) 04070061
1SN 391 KTR=O 04080061
1SN 392 END IF 04090061
1SN 393 REWIND 9 04100061
1SN 394 124 CONTINUE 04110061
1SN 395 READ(9,1000,END=224)GA,DCR,DODAC,CC,SRC,RECDTE,WT 04120061
1SN 396 IF (GA.EQ.'Y') THEN 04130061
1SN 397 KTR=KTR+1 04140061
1SN 398 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 04150061
1SN 399 END IF 04160061
1SN 400 GO TO 124 04170061
1SN 401 224 CONTINUE 04180061
1SN 402 REWIND 10 04190061
1SN 403 IF (KTR.GT.O) THEN 04200061
1SN 404 CALL SUN(PP,PAREA,PWGT,KV,FR,FAREA,FWGT,MDATE) 04210061
1SN 405 CALL PSHIP(PP,PAREA,PWGT,DEPOT) 04220061
1SN 406 CALL FSHIP(FR,FAREA,PWGT,MDATE,DEPOT) 04230061
1SN 407 KTR=O 04240061
1SN 408 END IF 04250061
1SN 409 REWIND 9 04260061
1SN 410 125 CONTINUE 04270061
1SN 411 READ(9,1000,END=225)GA,DCR,DODAC,CC,SRC,RECDTE,WT 04280061
1SN 412 IF (GA.EQ.'Z') THEN 04290061
1SN 413 KTR=KTR+1 04300061
1SN 414 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 04310061
1SN 415 END IF 04320061
1SN 416 GO TO 125 04330061
1SN 417 225 CONTINUE 04340061
1SN 418 REWIND 10 04350061
1SN 419 IF (KTR.GT.O) THEN 04360061
1SN 420 CALL SUN(PP,PAREA,PWGT,KV,FR,FAREA,FWGT,MDATE) 04370061
1SN 421 CALL PSHIP(PP,PAREA,PWGT,DEPOT) 04380061
1SN 422 CALL FSHIP(FR,FAREA,PWGT,MDATE,DEPOT) 04390061
1SN 423 KTR=O 04400061
1SN 424 END IF 04410061
1SN 425 REWIND 9 04420061
1SN 426 126 CONTINUE 04430061

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* .....1.....2.....3.....4.....5.....6.....7.....8
483 IF (KTR.GT.O) THEN 05000061
484 CALL SUN(PP,AREA,PWGT,K4,FR,FAREA,FWGT,MDATE) 05010061
485 CALL PSHIP(PP,AREA,PWGT,DEPOT) 05020061
486 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 05030061
487 KTR=O 05040061
488 END IF 05050061
489 REWIND 9 05060061
490 130 CONTINUE 05070061
491 READ(9,1000,END=230)GA,DCR,DODAC,CC,SRC,RECOTE,WT 05080061
492 IF (GA.EQ.'5') THEN 05090061
493 KTR=KTR+1 05100061
494 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT 05110061
495 END IF 05120061
496 GO TO 130 05130061
497 230 CONTINUE 05140061
498 REWIND 10 05150061
499 IF (KTR.GT.O) THEN 05160061
500 CALL SUN(PP,AREA,PWGT,K5,FR,FAREA,FWGT,MDATE) 05170061
501 CALL PSHIP(PP,AREA,PWGT,DEPOT) 05180061
502 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 05190061
503 KTR=O 05200061
504 END IF 05210061
505 REWIND 9 05220061
506 131 CONTINUE 05230061
507 READ(9,1000,END=231)GA,DCR,DODAC,CC,SRC,RECOTE,WT 05240061
508 IF (GA.EQ.'6') THEN 05250061
509 KTR=KTR+1 05260061
510 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT 05270061
511 END IF 05280061
512 GO TO 131 05290061
513 231 CONTINUE 05300061
514 REWIND 10 05310061
515 IF (KTR.GT.O) THEN 05320061
516 CALL SUN(PP,AREA,PWGT,K6,FR,FAREA,FWGT,MDATE) 05330061
517 CALL PSHIP(PP,AREA,PWGT,DEPOT) 05340061
518 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 05350061
519 KTR=O 05360061
520 END IF 05370061
521 REWIND 9 05380061
522 132 CONTINUE 05390061
523 READ(9,1000,END=232)GA,DCR,DODAC,CC,SRC,RECOTE,WT 05400061
524 IF (GA.EQ.'7') THEN 05410061
525 KTR=KTR+1 05420061
526 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECOTE,WT 05430061
527 END IF 05440061
528 GO TO 132 05450061
529 232 CONTINUE 05460061
530 REWIND 10 05470061
531 IF (KTR.GT.O) THEN 05480061
532 CALL SUN(PP,AREA,PWGT,K7,FR,FAREA,FWGT,MDATE) 05490061
533 CALL PSHIP(PP,AREA,PWGT,DEPOT) 05500061
534 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 05510061
535 KTR=O 05520061
536 END IF 05530061
537 REWIND 9 05540061
538 133 CONTINUE 05550061

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*.....1.....2.....3.....4.....5.....6.....7.....8
539 READ(9,1000,END=233)GA,DCR,DODAC,CC,SRC,RECDTE,WT 05560061
540 IF (GA.EQ.'8') THEN 05570061
541 KTR=KTR+1 05580061
542 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 05590061
543 05600061
544 GO TO 133
545 233 CONTINUE
546 REWIND 10
547 IF (KTR.GT.0) THEN
548 CALL SUN(PP,PAREA,PWGT,K8,FR,FAREA,FWGT,MDATE) 05640061
549 CALL PSHIP(PP,PAREA,PWGT,DEPOT) 05650061
550 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 05660061
551 KTR=0 05670061
552 END IF 05680061
553 REWIND 9 05690061
554 134 CONTINUE 05700061
555 READ(9,1000,END=234)GA,DCR,DODAC,CC,SRC,RECDTE,WT 05710061
556 IF (GA.EQ.'9') THEN 05720061
557 KTR=KTR+1 05730061
558 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 05740061
559 ENDIF 05750061
560 GO TO 134 05760061
561 234 CONTINUE 05770061
562 REWIND 10 05780061
563 IF (KTR.GT.0) THEN 05790061
564 CALL SUN(PP,PAREA,PWGT,K8,FR,FAREA,FWGT,MDATE) 05800061
565 CALL PSHIP(PP,PAREA,PWGT,DEPOT) 05810061
566 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 05820061
567 KTR=0 05830061
568 END IF 05840061
569 STOP 05850061
570 END 05860061

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STATISTICS SOURCE STATEMENTS = 570, PROGRAM SIZE = 751884 BYTES, PROGRAM NAME = MAIN PAGE: 1.

STATISTICS NO DIAGNOSTICS GENERATED.

***** END OF COMPILATION 1 *****

OPTIONS IN EFFECT: NOLIST NOMAP NOXREF NOGOSTMT NODECK SOURCE TERM OBJECT FIXED NOTEST NOTRMFLG SRCFLG NOSYM
OPT(O) LANGVL(77) NOFIPS FLAG(1) NAME(MAIN) LINECOUNT(60) CHARLEN(500) SDUMP

1.....2.....3.....4.....5.....6.....7.....8

```

C
C SUBROUTINE TO CONSOLIDATE SHIPPING UNITS FOR SMALL PARCEL POST
C AND FREIGHT ACCORDING TO THE FOLLOWING:  SIMILAR GEOGRAPHICAL
C AREA,  SIMILAR DODAC,  SIMILAR CARGO CODE,  SIMILAR SPECIAL
C REQUIREMENTS CODE AND WITHIN THE MOT OF THE OLDEST WRD.
C
1  SUBROUTINE SUN(PP,PAREA,PWGT,KK,FR,FAREA,FWGT,MDATE)
2  INTEGER RDATE(10000),PP,FR,RECDTE,TDATE,MDATE(10000),
3  $   PCTR(10000),FCTR(10000)
4  REAL PWGT(10000),FWGT(10000),WT,SUMWGT
5  CHARACTER*1 GA,TGA,CC,TCC,SRC,TSRC
6  CHARACTER*6 PAREA(10000,5),FAREA(10000,5),DCR,TDCR,DODAC,
7  $   TODAC
8  PP=0
9  CTR=0
10 FR=0
11 READ (10,1000)GA,DCR,DODAC,CC,SRC,RECDTE,WT
12 1000 FORMAT (A,2X,A6,1X,A6,2(1X,A),1X,13,1X,F9.3)
13 TGA=GA
14 TDCR=DCR
15 TODAC=DODAC
16 TCC=CC
17 TSRC=SRC
18 TDATE=RECDTE
19 CTR=1
20 SUMWGT=WT
21 MOT=RECDTE+KK
22 100 CONTINUE
23 READ(10,1000,END=101)GA,DCR,DODAC,CC,SRC,RECDTE,WT
24 IF (TODAC.EQ.DODAC.AND.TCC.EQ.CC.AND.TSRC.EQ.SRC.AND.
25 $   RECDTE.LE.MOT) THEN
26   SUMWGT=SUMWGT+WT
27   TGA=GA
28   TDCR=DCR
29   CTR=CTR+1
30   TODAC=DODAC
31   TCC=CC
32   TSRC=SRC
33   TDATE=RECDTE
34 ELSE
35   IF (SUMWGT.LE.70.000) THEN
36     PP=PP+1
37     PAREA(PP,1)=TGA
38     PAREA(PP,2)=TDCR
39     PAREA(PP,3)=TODAC
40     PAREA(PP,4)=TCC
41     PAREA(PP,5)=TSRC
42     PCTR(PP)=CTR
43     PWGT(PP)=SUMWGT
44   ELSE
45     FR=FR+1
46     FAREA(FR,1)=TGA
47     FAREA(FR,2)=TDCR

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45  ISN      FAREA(FR,3)=TDDDAC      06410061
46  ISN      FAREA(FR,4)=TCC        06420061
47  ISN      FAREA(FR,5)=TSRC       06430061
48  ISN      FCTR(FR)=CTR           06440083
49  ISN      FWGT(FR)=SUMWGT        06450061
50  ISN      MDATE(FR)=MDT          06460061
51  ISN      END IF                  06470061
52  ISN      TGA=GA                  06480061
53  ISN      TDCR=DCR                06490061
54  ISN      CTR=1                   06500085
55  ISN      TDDDAC=DODAC            06510061
56  ISN      TCC=CC                  06520061
57  ISN      TSRC=SRC                06530061
58  ISN      TDATE=RECDTE            06540061
59  ISN      SUMWGT=WT               06550061
60  ISN      MDT=RECDTE+KK           06560061
61  ISN      END IF                  06570061
62  ISN      GO TO 100               06580061
63  ISN      101 CONTINUE            06590061
64  ISN      IF (SUMWGT.LE.70.000) THEN 06600061
65  ISN      PP=PP+1                 06610061
66  ISN      PAREA(PP,1)=TGA         06620061
67  ISN      PAREA(PP,2)=TDCR        06630061
68  ISN      PAREA(PP,3)=TDDDAC      06640061
69  ISN      PAREA(PP,4)=TCC         06650061
70  ISN      PAREA(PP,5)=TSRC        06660061
71  ISN      PCTR(PP)=CTR             06670083
72  ISN      PWGT(PP)=SUMWGT         06680061
73  ISN      ELSE                    06690061
74  ISN      FR=FR+1                  06700061
75  ISN      FAREA(FR,1)=TGA         06710061
76  ISN      FAREA(FR,2)=TDCR        06720061
77  ISN      FAREA(FR,3)=TDDDAC      06730061
78  ISN      FAREA(FR,4)=TCC         06740061
79  ISN      FAREA(FR,5)=TSRC        06750061
80  ISN      FCTR(FR)=CTR             06760083
81  ISN      FWGT(FR)=SUMWGT         06770061
82  ISN      MDATE(FR)=MDT           06780061
83  ISN      END IF                  06790061
84  ISN      REWIND 10                06800061
85  ISN      RETURN                   06810061
86  ISN      END                      06820061

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STATISTICS S'JRCE STATEMENTS = 86, PROGRAM SIZE = 85346 BYTES, PROGRAM NAME = SUN PAGE: 12.

STATISTICS NO DIAGNOSTICS GENERATED.

***** END OF COMPILATION 2 *****

OPTIONS IN EFFECT: NOLIST NOMAP NOXREF NOGOSTMT NODECK SOURCE TERM OBJECT FIXED NOTEST NOTRMFLG SRCFLG NOSYM
 OPT(O) LANGVL(77) NOFIPS FLAG(1) NAME(MAIN) LINECOUNT(60) CHARLEN(500) SDUMP

*.....1.....2.....3.....4.....5.....6.....7.....8

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C
C SUBROUTINE TO CONSOLIDATE SMALL PARCEL SHIPPING UNITS ACCORDING TO
C SAME DODAC. CALCULATES THE NUMBER OF SHIPPING UNITS, THE TOTAL
C WEIGHT AND THE AVERAGE WEIGHT.
C
1  SUBROUTINE PSHIP(PP,PAREA,PWGT,DEPOT)
2  INTEGER PP,PCTR(10000)
3  REAL PWGT(10000),SUMWT,AVGWT
4  CHARACTER*2 DEPOT
5  CHARACTER*6 PAREA(10000,5)
6  LINES=5
7  IF (PP.GT.0) THEN
8    SUMWT=PWGT(1)
9    NSU=1
10   DO 10 J=2,PP
11     IF (PAREA(J,3).EQ.PAREA(J-1,3)) THEN
12       NSU=NSU+1
13       SUMWT=SUMWT+PWGT(J)
14       IF (J.EQ.PP) THEN
15         AVGWT=SUMWT/NSU
16         WRITE (20,1001) PAREA(J-1,1),PAREA(J-1,3),NSU,
17           $ PCTR(J-1),SUMWT,AVGWT
18         LINES=LINES+1
19         END IF
20       ELSE
21         AVGWT=SUMWT/NSU
22         IF (J.EQ.PP) THEN
23           WRITE (20,1001) PAREA(J,1),PAREA(J,3),NSU,
24             $ PCTR(J),SUMWT,AVGWT
25           LINES=LINES+1
26           ELSE
27             WRITE (20,1001) PAREA(J-1,1),PAREA(J-1,3),NSU,
28               $ PCTR(J-1),SUMWT,AVGWT
29             LINES=LINES+1
30             FORMAT (A,5X,A6,7X,I3,2X,I6,F11.3,4X,F11.3)
31             SUMWT=PWGT(J)
32             NSU=1
33             END IF
34           10 CONTINUE
35           END IF
36           RETURN
37           END

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STATISTICS SOURCE STATEMENTS = 35, PROGRAM SIZE = 42286 BYTES, PROGRAM NAME = PSHIP PAGE: 14.

STATISTICS NO DIAGNOSTICS GENERATED.

***** END OF COMPILATION 3 *****

REQUESTED OPTIONS (EXECUTE): NOTF, NODECK, NOLIST, OPT(O)

OPTIONS IN EFFECT: NOLIST NOMAP NOXREF NOGDSMT NODECK SOURCE TERM OBJECT FIXED NOTEST NOTRMFLG SRCFLG NOSYM
 OPT(O) LANGVL(77) NOFIPS FLAG(1) NAME(MAIN) LINECOUNT(60) CHARLEN(500) SDUMP

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*.....1.....2.....3.....4.....5.....6.....7.....8
1      INTEGER MDT, TMDT, FR, NTL, NLTL      00010039
2      REAL WT, SUMWT, TUWT(10000), SUMLTL, SUMTL, AVGLTL 00020053
3      CHARACTER*1 GA, CC, SRC, TGA         00030009
4      CHARACTER*2 DEPOT                    00040026
5      CHARACTER*6 DCR, TUNIT(10000,2), TDCR 00050053
6      C PROGRAM TO CONSOLIDATE FREIGHT SHIPPING UNITS INTO TRANSPORTATION 00060032
7      C UNITS.                                00070032
8      C                                         00080032
9      READ(9,1000) DEPOT,GA,DCR,CC,SRC,WT,MDT 00090032
10     FORMAT (A2,1X,A,6X,A6,8X,A,6X,A,6X,A,6X,F9.3,1X,I3) 00100026
11     TGA=GA                                00110044
12     TDCR=DCR                              00120009
13     TMDT=MDT                              00130009
14     SUMWT=WT                              00140009
15     FR=O                                  00150009
16     100 CONTINUE                         00160009
17     READ(9,1000) DEPOT,GA,DCR,CC,SRC,WT,MDT 00170009
18     FORMAT (A2,1X,A,6X,A6,8X,A,6X,A,6X,A,6X,F9.3,1X,I3) 00180026
19     TGA=GA                                00190009
20     TDCR=DCR                              00200009
21     TMDT=MDT                              00210009
22     SUMWT=SUMWT+WT                       00220009
23     TGA=GA                                00230009
24     TDCR=DCR                              00240009
25     TMDT=MDT                              00250009
26     110 CONTINUE                         00260040
27     IF (SUMWT.GT.30000.000) THEN         00270009
28     SUMWT=SUMWT-30000.000               00280009
29     FR=FR+1                              00290009
30     TUNIT(FR,1)=TGA                     00300009
31     TUNIT(FR,2)=TDCR                     00310009
32     TUWT(FR)=SUMWT                       00320009
33     GO TO 110                            00330009
34     ELSE                                  00340009
35     FR=FR+1                              00350009
36     TUNIT(FR,1)=TGA                     00360009
37     TUNIT(FR,2)=TDCR                     00370009
38     TUWT(FR)=SUMWT                       00380009
39     END IF                               00390009
40     TGA=GA                                00400009
41     TDCR=DCR                              00410009
42     TMDT=MDT                              00420009
43     SUMWT=WT                              00430009
44     GO TO 100                             00440009
45     200 CONTINUE                         00450009
46     IF (SUMWT.GT.30000.000) THEN         00460010
47     SUMWT=SUMWT-30000.000               00470010
48     FR=FR+1                              00480010
49     TUNIT(FR,1)=TGA                     00490010
50     TUNIT(FR,2)=TDCR                     00500010
51     TUWT(FR)=SUMWT                       00510010

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*.....1.....2.....3.....4.....5.....6.....7.....8
48      GO TO 200
49      ELSE
50      FR=FR+1
51      TUNIT(FR,1)=TGA
52      TUNIT(FR,2)=TDCR
53      TUNIT(FR)=SUMWT
54      END IF
55      LINES=5
56      FR=FR+1
57      TUNIT(FR,1)=
58      TUNIT(FR,2)=
59      TUNIT(FR)=0
60      SUMTL=0
61      SUMTL=0
62      NTL=0
63      NTL=0
64      IF (TUNIT(1).LT.30000.000) THEN
65      SUMTL=TUNIT(1)
66      NTL=NTL+1
67      ELSE
68      SUMTL=TUNIT(1)
69      NTL=NTL+1
70      END IF
71      K=1
72      DO 10 J=2,FR
73      IF (TUNIT(J,1).EQ.TUNIT(J-1,1)) THEN
74      IF (TUNIT(J,2).EQ.TUNIT(J-1,2)) THEN
75      IF (TUNIT(J).LT.30000.000) THEN
76      SUMTL=SUMTL+TUNIT(J)
77      NTL=NTL+1
78      ELSE
79      SUMTL=SUMTL+TUNIT(J)
80      NTL=NTL+1
81      END IF
82      ELSE
83      AVGLTL=SUMTL/NTL
84      IF (LINES.EQ.55) THEN
85      LINES=5
86      K=J-1
87      END IF
88      IF (NTL.GT.0) THEN
89      WRITE(21,1001) TUNIT(J-1,1),TUNIT(J-1,2),NTL,SUMTL,
$
1001      AVGLTL,NTL,SUMTL
90      FORMAT (A6,3X,A6,2X,I3,2(4X,F10.3),2X,I3,2(4X,F11.3))
91      LINES=LINES+1
92      ELSE
93      WRITE (21,1001) TUNIT(J-1,1),TUNIT(J-1,2),NTL,
$
SUMTL,AVGLTL,NTL,SUMTL
94      LINES=LINES+1
95      END IF
96      SUMTL=0
97      NTL=0
98      NTL=0
99      NTL=0
100      IF (TUNIT(J).LT.30000.000) THEN
101      SUMTL=SUMTL+TUNIT(J)

```

```

00520010
00530010
00540010
00550010
00560010
00570010
00580010
00590020
00600018
00610018
00620018
00630018
00640011
00650011
00660011
00670011
00680011
00690011
00700011
00710011
00720011
00730011
00740011
00750020
00760011
00770011
00780012
00790011
00800011
00810011
00820011
00830011
00840011
00850011
00860011
00870011
00880020
00890020
00900020
00910020
00920019
00930049
00940049
00950049
00960020
00970019
00980055
00990055
01000020
01010019
01020011
01030011
01040011
01050011
01060016
01070016

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*.....1.....2.....3.....4.....5.....6.....7.....8
102      NLT=NLT+1
103      ELSE
104      SUMTL=TUWT(J)
105      NTL=NTL+1
106      END IF
107      END IF
108      ELSE
109      IF (NTL.GT.0) THEN
110      WRITE(21,1001) TUNIT(J-1,1),TUNIT(J-1,2),NLT,SUMTL,
$          AVGLTL,NTL,SUMTL
111      LINES=LINES+1
112      ELSE
113      WRITE(21,1001) TUNIT(J-1,1),TUNIT(J-1,2),NLT,SUMTL,
$          AVGLTL,NTL,SUMTL
114      LINES=LINES+1
115      END IF
116      LINES=5
117      SUMTL=0
118      SUMTL=0
119      NTL=0
120      NTL=0
121      IF (TUWT(J).LT.30000.000) THEN
122      SUMTL=TUWT(J)
123      NTL=NLT+1
124      ELSE
125      SUMTL=TUWT(J)
126      NTL=NTL+1
127      END IF
128      END IF
129      IO CONTINUE
130      STOP
131      END

```

STATISTICS SOURCE STATEMENTS = 131, PROGRAM SIZE = 166702 BYTES, PROGRAM NAME = MAIN PAGE: 1.

STATISTICS NO DIAGNOSTICS GENERATED.

***** END OF COMPILATION 1 *****

APPENDIX B

Sample Simulation Output Case

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
A	A	873270	060	C4461900	7	15192	\$312.29
		NUMBER OF GBLS PER DCR		1			
		SUBTOTAL			7	15192	
		AVERAGE WEIGHT				15192	
B	B	Z12508	090	C4467607	3	212	\$21.20
		NUMBER OF GBLS PER DCR		1			
		SUBTOTAL			3	212	
		AVERAGE WEIGHT				212	
		Z13413	063	C4462776	1	13	\$20.00
		NUMBER OF GBLS PER DCR		1			
		SUBTOTAL			1	13	
		AVERAGE WEIGHT				13	
		Z13414	090	C4467683	1	204	\$20.40
		NUMBER OF GBLS PER DCR		1			
		SUBTOTAL			1	204	
		AVERAGE WEIGHT				204	
		Z20285	083	C4466490	1	111	\$20.00
		NUMBER OF GBLS PER DCR		C4467611	4	438	\$29.40
		SUBTOTAL					
		AVERAGE WEIGHT					
		Z36266	083	C4466491	1	318	\$29.94
		NUMBER OF GBLS PER DCR		1			
		SUBTOTAL			1	318	
		AVERAGE WEIGHT				318	
		149136	055	C4461120	1	87	\$20.00
		NUMBER OF GBLS PER DCR		C4463723	1	40	\$20.00
		SUBTOTAL					
		AVERAGE WEIGHT					
		149137	090	C4467610	1	516	\$30.96
		NUMBER OF GBLS PER DCR		1			
		SUBTOTAL			1	516	
		AVERAGE WEIGHT				516	
		871155	055	C4461118	5	1112	\$44.48
		NUMBER OF GBLS PER DCR		C4462325	3	1007	\$50.35
		SUBTOTAL					
		AVERAGE WEIGHT					

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
A	B	871155	063	C4462777	3	732	\$43.92
			069	C4463703	3	455	\$29.94
			076	C4465291	3	316	\$18.96
			083	C4466485	7	1302	\$65.10
			090	C4467609	1	702	\$42.12
				C4467686	2	2507	\$100.28

NUMBER OF GBLS PER DCR
SUBTOTAL 8
AVERAGE WEIGHT 27 8133
1017

87175A 069 C4463701 1 240 \$24.00

NUMBER OF GBLS PER DCR
SUBTOTAL 1
AVERAGE WEIGHT 1 240
240

87327K 069 C4463702 1 141 \$20.00
076 C4465290 1 296 \$29.60
083 C4466487 1 206 \$20.60
090 C4467682 1 159 \$15.90

NUMBER OF GBLS PER DCR
SUBTOTAL 4
AVERAGE WEIGHT 4 802
200

87327O 055 C4461066 23 4702 \$121.48
062 C4462323 4 1439 \$71.95
063 C4462778 9 2623 \$104.92
069 C4463699 5 1829 \$73.16
076 C4463722 5 532 \$31.92
083 C4464784 4 9100 \$229.70
090 C4465289 5 902 \$40.34
C4466492 18 4726 \$144.18
C4467606 1 325 \$29.94
C4467671 15 11471 \$290.79

NUMBER OF GBLS PER DCR
SUBTOTAL 10
AVERAGE WEIGHT 89 37649
3765

87385A 090 C4467608 1 19 \$20.00

NUMBER OF GBLS PER DCR
SUBTOTAL 1
AVERAGE WEIGHT 1 19
19

SUBTOTAL 143 63974
SUBTOTAL 34
B A C62KVQ 055 C4460716 1 6120 \$79.68

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST	
B	A	NUMBER OF GBLs PER DCR		1				
		SUBTOTAL			1	6120		
		AVERAGE WEIGHT				6120		
		HX3620		O55	C4461102	3	13551	\$285.00
		NUMBER OF GBLs PER DCR		1				
		SUBTOTAL			3	13551		
	AVERAGE WEIGHT				13551			
	SUBCA6		O54	C4461032	6	1713	\$19.58	
	NUMBER OF GBLs PER DCR		1					
	SUBTOTAL			6	1713			
	AVERAGE WEIGHT				1713			
	229		O50 O76	C4460262 C4465098	6 1	1680 2883	\$31.47 \$82.92	
NUMBER OF GBLs PER DCR		2						
SUBTOTAL			7	4563				
AVERAGE WEIGHT				2282				
3DK		O57 O67	C4460493 C4461784	1 1	1780 350	\$9.64 \$3.98		
NUMBER OF GBLs PER DCR		2						
SUBTOTAL			2	2130				
AVERAGE WEIGHT				1065				
87643J		O70	C4463947	7	8791	\$261.67		
NUMBER OF GBLs PER DCR		1						
SUBTOTAL			7	8791				
AVERAGE WEIGHT				8791				
87643L		O49 O63	C4459977 C4460026 C4462766	1 6 3	73 3063 2315	\$1.52 \$65.04 \$25.50		
NUMBER OF GBLs PER DCR		3						
SUBTOTAL			10	5451				
AVERAGE WEIGHT				1817				
87844J		O56 O60 O77 O78 O83	C4461247 C4461810 C4465554 C4465809 C4466465	6 3 2 3 2	18476 34600 18294 28630 22483	\$170.57 \$250.81 \$295.00 \$295.01 \$295.00		
NUMBER OF GBLs PER DCR								
SUBTOTAL				5	18455	\$229.01		
AVERAGE WEIGHT				25	9886	\$215.42		
87844J		O84	C4466493 C4466517 C4466705	9 25 9	10596	\$118.75		

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	A	87644J	084	C4466748	1	14986	\$133.42
			085	C4467050	1	7995	\$79.75
			10		57	184401	
			SUBTOTAL			18440	
			AVERAGE WEIGHT				
		87650M	064	C4462945	5	4995	\$70.16
			1		5	4995	
			SUBTOTAL			4995	
			AVERAGE WEIGHT				
			056	C4461252	1	424	\$7.55
B	B	879743	1		1	424	
			SUBTOTAL			424	
			AVERAGE WEIGHT				
		CLOAHB	083	C4466600	1	180	\$17.00
			1		1	180	
			SUBTOTAL			180	
			AVERAGE WEIGHT				
			053	C4460441	2	594	\$35.34
			055	C4461127	2	254	\$21.08
			060	C4461697	1	992	\$59.44
			063	C4462782	1	216	\$17.93
			064	C4462937	1	470	\$33.68
		CLOCE2	067	C4463096	1	146	\$17.00
			069	C4463639	1	306	\$25.40
			070	C4463714	2	410	\$28.29
			074	C4464102	1	72	\$15.30
			076	C4464376	3	4020	\$124.97
			081	C4464998	1	137	\$17.00
			082	C4465220	1	1725	\$101.02
			083	C4465836	3	1889	\$103.95
			088	C4466302	2	200	\$16.60
			090	C4466317	1	1275	\$75.86
		C62KVQ	088	C4466604	2	136	\$11.29
			090	C4467028	1	662	\$44.69
			099	C4467621	2	836	\$56.43
			069	C4467655	3	605	\$40.84
			19		31	14945	
			SUBTOTAL			787	
			AVERAGE WEIGHT				
			069	C4463712	1	73	\$6.30
			1		1	73	
			SUBTOTAL			73	

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	B	HX3619	O49 O50	C4460106 C4460193	1 3 2	73 661 281	\$44.62 \$23.32
		HX3620	O56 O60 O61 O62 O64 O67 O69 O76 O78 O83 O84	C4461241 C4461792 C4462263 C4462456 C4463078 C4463318 C4463823 C4465288 C4465697 C4466605 C4466733	5 1 1 1 1 1 2 4 1 2 1	2818 617 240 2868 100 104 5025 1605 43 277 978	\$104.16 \$41.65 \$19.92 \$124.98 \$5.95 \$17.00 \$125.63 \$95.49 \$5.67 \$22.99 \$59.44
		NO0236	O50 O54 O56 O62 O63 O69 O75 O76 O77 O78 O81 O82 O83 O88 O90	C4460202 C4460318 C4460923 C4461246 C4462315 C4462458 C4462780 C4463705 C4464946 C4465285 C4465546 C4465694 C4465828 C4466303 C4466314 C4466609 C4467092 C4467614 C4467692	20 2 1 1 1 1 2 4 1 1 2 1 1 1 2 1 1 1 8	14675 1334 378 110 98 145 112 175 347 299 220 115 465 196 89 184 274 414 62 100 2753	\$23.90 \$16.12 \$17.00 \$17.00 \$2.80 \$14.53 \$28.80 \$24.82 \$18.26 \$2.87 \$33.68 \$17.00 \$3.38 \$17.00 \$13.70 \$33.68 \$6.13 \$8.30 \$124.98
		NO0296	O49	C4460068	33 1	6536 344 162	\$17.00

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	B	N00296	050	C4460200	2	163	\$17.00
			053	C4460434	1	220	\$18.26
			055	C4461125	2	469	\$32.90
			061	C4462257	1	166	\$17.00
			062	C4462591	1	183	\$17.00
			063	C4462789	2	95	\$17.00
			064	C4462936	1	860	\$58.05
			067	C4463097	1	445	\$33.68
			074	C4464642	1	155	\$17.00
			075	C4464942	1	462	\$33.68
			076	C4465284	2	339	\$28.14
			083	C4466602	4	783	\$52.84
			089	C4467555	1	550	\$37.13
			080	C4467697	1	174	\$14.44
			NUMBER OF GBLS PER DCR				
SUBTOTAL							
AVERAGE WEIGHT							
N0053A							
NUMBER OF GBLS PER DCR							
SUBTOTAL							
AVERAGE WEIGHT							
N00849							
NUMBER OF GBLS PER DCR							
SUBTOTAL							
AVERAGE WEIGHT							
N62448							
NUMBER OF GBLS PER DCR							
SUBTOTAL							
AVERAGE WEIGHT							
N62848							
NUMBER OF GBLS PER DCR							
SUBTOTAL							
AVERAGE WEIGHT							
SUBCA6							
NUMBER OF GBLS PER DCR							
SUBTOTAL							
AVERAGE WEIGHT							
SUU							
NUMBER OF GBLS PER DCR							
SUBTOTAL							
AVERAGE WEIGHT							

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	B	SW3200	NUMBER OF GBLS PER DCR		1	2	
			SUBTOTAL		1	2	
			AVERAGE WEIGHT				
			048		1	56	\$0.00
			075	RO090054	1	1068	\$0.01
			077		1	375	\$0.00
			089	RO090206	1	6010	\$0.01
			NUMBER OF GBLS PER DCR		4	7509	
			SUBTOTAL		4	1877	
			AVERAGE WEIGHT				
		WB1A1J	NUMBER OF GBLS PER DCR		1	188	\$17.00
			SUBTOTAL		1	188	
			AVERAGE WEIGHT				
			074	C4464646	1	188	\$17.00
			NUMBER OF GBLS PER DCR		1	188	
			SUBTOTAL		1	188	
			AVERAGE WEIGHT				
			063	C4462868	1	2040	\$106.08
			NUMBER OF GBLS PER DCR		1	2040	
			SUBTOTAL		1	2040	
			AVERAGE WEIGHT				
		Z11412	NUMBER OF GBLS PER DCR		1	120	\$13.18
			SUBTOTAL		1	120	
			AVERAGE WEIGHT				
			069	C4463704	1	120	\$13.18
			NUMBER OF GBLS PER DCR		1	120	
			SUBTOTAL		1	120	
			AVERAGE WEIGHT				
			075	C4464866	1	22	\$17.00
			NUMBER OF GBLS PER DCR		1	22	
			SUBTOTAL		1	22	
			AVERAGE WEIGHT				
		Z47500	NUMBER OF GBLS PER DCR		1	470	\$33.68
			SUBTOTAL		1	470	
			AVERAGE WEIGHT				
			067	C4463095	1	470	\$33.68
			070	C4464111	2	220	\$18.26
			075	C4464947	1	80	\$4.84
			090	C4467613	1	115	\$17.00
				C4467689	2	215	\$17.85
			NUMBER OF GBLS PER DCR		5	1100	
			SUBTOTAL		5	1100	
			AVERAGE WEIGHT				
		228	NUMBER OF GBLS PER DCR		2	329	\$8.48
			SUBTOTAL		2	329	
			AVERAGE WEIGHT				
			049	C4460100	2	329	\$8.48
			053	C4460528	3	2286	\$104.82
			055	C4460981	3	561	\$37.87
				C4461124	5	1767	\$102.49
			087	C4461521	3	302	\$17.97
			NUMBER OF GBLS PER DCR		3	302	
			SUBTOTAL		3	302	
			AVERAGE WEIGHT				

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF SMALL PARCEL CARRIER SHIPMENTS BUILT

GEOGRAPHIC AREA	MODE SHIPMENT	PARCEL OF POST ZONE	NUMBER OF SHIPPING UNITS	TOTAL WEIGHT	AVERAGE WEIGHT	COST PER SHIPMENT	TOTAL SHIPMENT COST
A	G	2	27	386.782	14.325	\$2.75	\$74.25
		3	23	72.215	3.140	\$2.10	\$48.30
	S	2	262	13449.458	51.334	\$5.53	\$1,448.86
		3	161	1656.226	10.287	\$2.55	\$410.55
		8	15	248.820	16.588	\$8.48	\$127.20
B	G	1	247	3553.495	14.387	\$2.75	\$679.25
		2	43	359.546	8.362	\$2.30	\$98.90
		4	3	18.282	6.094	\$3.10	\$9.30
		9	235	4559.852	19.404	\$0.00	\$0.00
	S	1	1167	38024.096	32.583	\$4.11	\$4,796.37
		2	284	4620.924	16.271	\$2.70	\$766.80
		3	15	111.639	7.443	\$2.16	\$32.40
		4	1	14.476	14.476	\$3.85	\$3.85
C	G	1	71	669.537	9.430	\$2.38	\$168.98
		2	64	659.362	10.303	\$2.47	\$158.08
		3	18	182.347	10.130	\$3.11	\$55.98
		9	27	382.888	14.181	\$0.00	\$0.00
	S	1	446	10989.022	24.639	\$3.42	\$1,525.32
		2	522	14583.723	27.938	\$3.69	\$1,926.18
		3	256	5984.924	23.379	\$4.20	\$1,075.20
		8	9	86.097	9.566	\$5.53	\$49.77
D	G	3	239	3898.818	16.313	\$3.70	\$884.30
		9	1	1.540	1.540	\$0.00	\$0.00
	S	3	553	15585.636	28.184	\$4.84	\$2,676.52
E	G	3	110	915.123	8.319	\$2.82	\$310.20
		4	258	3563.945	13.814	\$4.56	\$1,176.48
		9	156	1573.572	10.087	\$0.00	\$0.00
	S	3	403	11003.982	27.305	\$4.71	\$1,898.13
		4	996	24963.653	25.064	\$5.72	\$5,697.12
		9	3	275.715	91.905	\$0.00	\$0.00
F	G	4	64	589.127	9.205	\$3.78	\$241.92
		9	24	170.335	7.097	\$0.00	\$0.00
	S	4	758	24282.786	32.035	\$7.01	\$5,313.58
G	G	1	9	244.420	27.158	\$3.29	\$29.61
		2	145	2619.133	18.063	\$2.93	\$424.85
		9	39	323.631	8.298	\$0.00	\$0.00
	S	1	150	6573.314	43.822	\$4.99	\$748.50
		2	289	9655.305	33.409	\$4.19	\$1,210.91
H	G	2	20	92.158	4.608	\$1.95	\$39.00
		4	71	1023.099	14.410	\$4.67	\$331.57
		5	31	455.455	14.692	\$6.44	\$199.64
		6	2	4.972	2.486	\$2.98	\$5.96
	S	2	5	24.288	4.858	\$1.62	\$8.10
		4	816	33551.969	41.118	\$8.56	\$6,984.96
		5	649	16690.124	25.717	\$6.94	\$4,504.06
		6	97	2519.231	25.971	\$8.63	\$837.11
I	G	1	15	202.917	13.528	\$2.69	\$40.35

DEFENSE DEPOT TRACY, CALIFORNIA

		9	451	29604.344	65.642	\$0.00	\$0.00
	5	1	264	6641.052	25.156	\$3.51	\$926.64
J	G	4	35	455.741	13.021	\$4.56	\$159.60
		5	65	679.866	10.459	\$5.40	\$351.00
		9	415	14036.154	33.822	\$0.00	\$0.00
	5	3	2	3.311	1.656	\$1.47	\$2.94
		4	556	12464.771	22.419	\$5.21	\$2,896.76
		5	823	31167.422	37.871	\$9.68	\$7,966.64
		7	12	20.944	1.745	\$2.20	\$26.40
		9	1	46.860	46.860	\$0.00	\$0.00
K	G	2	20	170.137	8.507	\$2.30	\$46.00
		4	47	566.830	12.060	\$4.44	\$208.68
		5	19	185.647	9.771	\$5.05	\$95.95
		6	3	53.350	17.783	\$8.85	\$26.55
	5	2	236	6188.677	26.223	\$3.60	\$849.60
		4	700	22296.582	31.852	\$6.84	\$4,788.00
		5	333	11633.644	34.936	\$9.01	\$3,000.33
		6	73	1910.810	26.175	\$8.91	\$650.43
		8	1	0.110	0.110	\$1.91	\$1.91
L	G	3	110	2000.086	18.183	\$3.83	\$421.30
		4	160	2709.927	16.937	\$4.88	\$780.80
	5	3	10	238.271	23.827	\$4.20	\$42.00
		4	635	19255.830	30.324	\$6.62	\$4,203.70
M	G	4	10	174.229	17.423	\$4.98	\$49.80
	5	4	231	12802.933	55.424	\$10.21	\$2,358.51
		5	20	340.560	17.028	\$5.21	\$104.20
N	G	5	19	306.944	16.155	\$6.75	\$128.25
		6	66	670.274	10.156	\$6.83	\$450.78
		7	48	739.816	15.413	\$10.52	\$504.96
	5	5	285	4247.430	14.903	\$4.56	\$1,299.60
		6	251	4279.286	17.049	\$6.38	\$1,601.38
		7	624	27699.683	44.391	\$17.27	\$10,776.48
O	G	5	23	157.157	6.833	\$4.00	\$92.00
		6	1	16.500	16.500	\$8.66	\$8.66
	5	5	564	16857.907	29.890	\$7.80	\$4,399.20
		6	11	151.019	13.729	\$5.26	\$57.86
P	G	6	20	215.083	10.754	\$6.83	\$136.60
		7	9	112.310	12.479	\$9.65	\$86.85
	5	6	608	11134.442	18.313	\$6.67	\$4,055.36
		7	304	4892.657	16.094	\$7.26	\$2,207.04
		8	1	1.177	1.177	\$2.37	\$2.37
Q	G	5	2	4.818	2.409	\$2.59	\$5.18
		6	12	267.355	22.280	\$9.68	\$116.16
		7	19	282.821	14.885	\$10.24	\$194.56
	5	5	67	1020.338	15.229	\$4.78	\$320.26
		6	298	3845.413	12.904	\$4.98	\$1,484.04
		7	354	4205.091	11.879	\$5.51	\$1,950.54
		8	5	100.100	20.020	\$10.16	\$50.80
R	G	8	92	1430.506	15.549	\$15.35	\$1,412.20
		9	420	5525.113	13.155	\$0.00	\$0.00

DEFENSE DEPOT TRACY, CALIFORNIA

	S	7	127	1809.797	14.250	\$6.57	\$834.39
		8	1281	116784.481	91.167	\$24.79	\$31,755.99
		9	1	5.280	5.280	\$0.00	\$0.00
S	G	7	12	98.483	8.207	\$7.17	\$86.04
		8	12	185.493	15.458	\$15.35	\$184.20
		9	157	1657.964	10.560	\$0.00	\$0.00
	S	7	511	9193.921	17.992	\$7.61	\$3,888.71
		8	311	5923.269	19.046	\$9.74	\$3,029.14
T	G	8	40	339.691	8.492	\$10.22	\$408.80
		9	18	98.648	5.480	\$0.00	\$0.00
	S	8	585	9933.913	16.981	\$8.48	\$4,960.80
U	G	7	14	202.928	14.495	\$10.24	\$143.36
		8	39	694.991	17.820	\$16.11	\$628.29
	S	7	347	4979.502	14.350	\$6.57	\$2,279.79
		8	790	19368.371	24.517	\$11.84	\$9,353.60
V	G	3	1	0.011	0.011	\$1.81	\$1.81
		8	56	649.836	11.604	\$13.09	\$733.04
		9	372	3915.637	10.526	\$0.00	\$0.00
	S	3	13	205.150	15.781	\$3.18	\$41.34
		5	2	5.148	2.574	\$2.11	\$4.22
		8	1057	25557.378	24.179	\$11.84	\$12,514.88
W	G	8	41	645.315	15.739	\$15.35	\$629.35
		9	310	3331.977	10.748	\$0.00	\$0.00
	S	5	6	42.372	7.062	\$3.05	\$18.30
		8	900	45107.986	50.120	\$22.79	\$20,511.00
X	G	9	5	40.645	8.129	\$0.00	\$0.00
	S	9	2	0.209	0.105	\$0.00	\$0.00
Y	G	4	19	283.503	14.921	\$4.67	\$88.73
		5	66	785.708	11.905	\$5.75	\$379.50
	S	4	302	9877.098	32.706	\$7.01	\$2,117.02
		5	450	14656.378	32.570	\$8.58	\$3,861.00
Z	G	5	56	875.039	15.626	\$6.60	\$369.60
	S	5	689	35175.811	51.053	\$12.41	\$8,550.49
TOTAL			27726	837661.220			\$215,690.67

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	B	228	062	C4462319	1	44	\$17.00
				C4462464	3	111	\$9.21
				C4462787	10	1967	\$103.94
			063	C4462940	4	115	\$9.53
			064	C4464378	2	526	\$35.51
			074	C4465287	10	999	\$59.42
			076	C4465545	3	1273	\$75.75
			077	C4466299	1	45	\$3.73
			082	C4466316	3	5082	\$127.05
			083	C4466612	11	2800	\$123.41
				C4467101	10	4145	\$103.65
			088	C4467536	2	6	\$5.50
			089	C4467620	3	925	\$59.44
			090	C4467691	9	895	\$55.42

NUMBER OF GBLs PER DCR

SUBTOTAL
AVERAGE WEIGHT

229	049	C4460071	2	220	\$14.85
	055	C4461138	2	45	\$9.81
	056	C4461408	3	56	\$3.78
	060	C4461693	1	424	\$105.46
	063	C4462792	1	87	\$17.00
	064	C4462941	1	1	\$1.14
	069	C4463706	2	130	\$10.79
	070	C4464110	4	316	\$48.96
	076	C4465098	2	0	\$0.00
		C4465286	4	169	\$14.03
		C4465907	1	7	\$17.00
	081	C4466300	1	29	\$2.41
	082	C4466313	1	424	\$33.68
	083	C4466621	1	2153	\$112.58
	084	C4466737	1	204	\$16.93
	090	C4467612	1	95	\$5.65
		C4467688	2	60	\$4.98
		C4467699	2	158	\$17.00

NUMBER OF GBLs PER DCR

SUBTOTAL
AVERAGE WEIGHT

369104	089	C4467556	1	89	\$17.00
	090	C4467694	1	156	\$47.00
			2		
			2	245	
				123	
369108	070	C4464107	1	84	\$6.67
	077	C4465344	1	70	\$28.12
	090	4467696	1	103	\$17.00

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	NUMBER OF GBLs PER DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B		87494A	NUMBER OF GBLs PER DCR		3	3	257	
			SUBTOTAL				86	
			AVERAGE WEIGHT					\$17.00
			87494A		069	1	108	
		874995	NUMBER OF GBLs PER DCR		1	1	108	
			SUBTOTAL				108	
			AVERAGE WEIGHT					\$18.51
			874995		048	1	223	\$17.00
			NUMBER OF GBLs PER DCR		3	3	473	
			SUBTOTAL				158	
			AVERAGE WEIGHT					\$17.00
					069	1	74	
		87618A	NUMBER OF GBLs PER DCR		1	1	110	\$17.00
			SUBTOTAL				110	
			AVERAGE WEIGHT					\$23.41
			87618A		062	1	282	
		876180	NUMBER OF GBLs PER DCR		1	1	282	
			SUBTOTAL				282	
			AVERAGE WEIGHT					\$17.00
			876180		055	1	160	\$25.32
			NUMBER OF GBLs PER DCR		1	1	305	\$10.78
			SUBTOTAL				52	\$17.00
			AVERAGE WEIGHT				38	\$59.44
			876180		060	2	964	\$17.00
		87643J	NUMBER OF GBLs PER DCR		1	1	89	\$24.07
			SUBTOTAL				290	\$143.28
			AVERAGE WEIGHT				5731	\$22.24
			87643J		070	4	268	\$40.50
			NUMBER OF GBLs PER DCR		1	1	600	\$17.00
			SUBTOTAL				45	
			AVERAGE WEIGHT					\$17.00
					084	1	45	
		87643J	NUMBER OF GBLs PER DCR		11	15	8542	
			SUBTOTAL				777	
			AVERAGE WEIGHT					\$19.46
			87643J		050	7	519	\$32.40
			NUMBER OF GBLs PER DCR		5	5	480	\$21.76
			SUBTOTAL				281	\$11.23
			AVERAGE WEIGHT				160	\$84.42
					067	7	1419	\$26.43
			NUMBER OF GBLs PER DCR		1	1	379	
			SUBTOTAL					
			AVERAGE WEIGHT					
					071	1		

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	B	87643J	074	C4464640	1	42	\$2.84
			076	C4464995	3	961	\$59.44
			078	C4465692	1	209	\$13.84
			081	C4465827	2	1298	\$61.52

NUMBER OF GBL'S PER DCR

SUBTOTAL
AVERAGE WEIGHT

87643L

10	30	5744	
		574	
047	1	1168	\$79.86
050	1	371	\$30.79
055	6	4441	\$111.03
056	2	1773	\$103.95
057	1	265	\$22.00
060	1	895	\$59.44
064	1	523	\$35.30
068	4	2503	\$110.85
069	3	1567	\$81.48
070	2	1804	\$103.95
075	3	519	\$35.03
088	1	39	\$3.56

NUMBER OF GBL'S PER DCR

SUBTOTAL
AVERAGE WEIGHT

876439

12	26	15868	
		1322	
061	2	386	\$32.04
062	1	110	\$17.00
069	1	240	\$19.92

NUMBER OF GBL'S PER DCR

SUBTOTAL
AVERAGE WEIGHT

87644E

3	4	736	
		245	
055	2	114	\$17.00

NUMBER OF GBL'S PER DCR

SUBTOTAL
AVERAGE WEIGHT

87644J

1	2	114	
		114	
049	1	86	\$7.14
054	1	508	\$34.29
062	1	872	\$124.38
075	1	94	\$15.22
083	1	0	\$0.00
085	1	1160	\$295.00
088	1	600	\$40.50
089	1	88	\$17.00

NUMBER OF GBL'S PER DCR

SUBTOTAL
AVERAGE WEIGHT

8	8	13408	
		1676	

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST		
B	8	876440	049	C4460065	1	169	\$14.03		
			067	C4463098	2	550	\$37.13		
			090	C4467705	1	37	\$17.00		
			NUMBER OF GBL'S PER DCR				3		
SUBTOTAL				4	756				
AVERAGE WEIGHT					252				
B		876458	083	C4466594	1	183	\$17.00		
			NUMBER OF GBL'S PER DCR				1		
			SUBTOTAL				183		
			AVERAGE WEIGHT						
B		876501	055	C4461135	1	178	\$17.00		
			088	C4467031	1	84	\$17.00		
			089	C4467559	1	100	\$10.06		
			NUMBER OF GBL'S PER DCR				3		
SUBTOTAL				3	362				
AVERAGE WEIGHT					121				
B		876505	062	C4462320	1	8	\$17.00		
			067	C4463094	1	149	\$17.00		
			NUMBER OF GBL'S PER DCR				2		
			SUBTOTAL				2	157	
AVERAGE WEIGHT					79				
B		876535	049	C4460104	2	390	\$32.37		
			055	C4461134	1	68	\$17.00		
			056	C4461245	1	431	\$33.68		
			078	C4465693	1	18	\$4.71		
B		876550	083	C4466601	1	711	\$47.99		
			089	C4467558	1	111	\$17.00		
			090	C4467702	1	368	\$30.54		
			NUMBER OF GBL'S PER DCR				7		
SUBTOTAL				8	2097				
AVERAGE WEIGHT					300				
B		87655A	062	C4462462	4	1879	\$103.95		
			069	C4463719	2	1803	\$103.95		
			076	C4465280	2	1398	\$83.06		
			077	C4465552	1	322	\$26.73		
B		87655A	083	C4466610	3	1285	\$76.47		
			084	C4466736	4	2177	\$113.20		
			NUMBER OF GBL'S PER DCR				6		
			SUBTOTAL				16	8862	
AVERAGE WEIGHT					1477				

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	B	87672B	049	C4460069	1	265	\$22.00
			053	C4460435	2	395	\$32.79
			054	C4460917	1	681	\$45.97
			055	C4460980	1	276	\$22.91
				C4461126	2	224	\$18.59
			060	C4461695	2	592	\$39.96
			063	C4462790	1	130	\$17.00
			069	C4463638	1	720	\$48.60
				C4463710	2	72	\$8.05
			070	C4464104	1	132	\$17.00
			076	C4465276	1	124	\$17.00
			077	C4465542	1	85	\$17.00
			083	C4466607	2	813	\$54.88
			088	C4467027	1	96	\$17.00
			090	C4467617	1	2761	\$124.98
				C4467698	2	727	\$49.07

NUMBER OF GBLs PER DCR

SUBTOTAL
AVERAGE WEIGHT

87672C

B-16

061	C4462260	2	196	\$17.00
064	C4462938	1	203	\$16.85
069	C4463708	1	76	\$17.00
076	C4464999	2	350	\$29.05
	C4465281	2	352	\$23.76
077	C4465549	1	428	\$33.68
078	C4465696	1	668	\$45.09
090	C4467700	1	218	\$18.09

NUMBER OF GBLs PER DCR

SUBTOTAL
AVERAGE WEIGHT

87673A

049	C4460070	2	3348	\$124.98
050	C4460190	2	105	\$17.00
069	C4463717	1	101	\$17.00
070	C4464100	2	728	\$48.14
074	C4464375	1	1156	\$68.78
083	C4466599	1	677	\$45.70
090	C4467703	2	3625	\$124.98

NUMBER OF GBLs PER DCR

SUBTOTAL
AVERAGE WEIGHT

87674L

062	C4462454	1	70	\$17.00
075	C4465282	1	123	\$17.00

DEFENSE DEPOT TRACY, CALIFORNIA

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DEFENSE DEPOT TRACY, CALIFORNIA

OPTIMIZED NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	DCR	TOTAL NUMBER OF SHIPMENTS	TOTAL LTL WEIGHT	AVERAGE LTL WEIGHT	TOTAL NUMBER OF SHIPMENTS	TOTAL TL WEIGHT
A	Z12508	1	625.471	625.471	0	0.000
	Z13413	1	154.165	154.165	0	0.000
	Z13414	1	246.829	246.829	0	0.000
	Z20285	1	12088.168	12088.168	0	0.000
	Z36266	2	399.344	199.672	0	0.000
	129AD5	1	82.720	82.720	0	0.000
	129A12	1	89.958	89.958	0	0.000
	149136	1	128.700	128.700	0	0.000
	149137	1	597.740	597.740	0	0.000
	871155	9	9575.453	1063.939	0	0.000
	871730	1	71.885	71.885	0	0.000
	87174A	1	135.322	135.322	0	0.000
	87175A	3	618.860	206.287	0	0.000
	87234A	1	70.367	70.367	0	0.000
	87278A	1	104.522	104.522	0	0.000
	87327K	3	6973.910	2324.637	0	0.000
	873270	19	56509.676	2974.193	0	0.000
	87385A	1	141.328	141.328	0	0.000
		49	88614.418		0	0.000
				158.680	0	0.000
				2538.082	0	0.000
				3409.970	0	0.000
				1128.002	0	0.000
B	CLOAHE	2	317.361	158.680	0	0.000
	CLOCE2	7	17766.574	2538.082	0	0.000
	C62KVQ	2	6819.941	3409.970	0	0.000
	HX3619	1	1128.002	1128.002	0	0.000
	HX3620	5	50129.598	10025.910	0	0.000
	N00236	14	11026.520	787.609	0	0.000
	N00296	8	6982.773	872.847	0	0.000
	N0053A	1	228.800	228.800	0	0.000
	N00849	1	301.356	301.356	0	0.000
	N62448	1	86.592	86.592	0	0.000
	N62848	2	580.986	290.493	0	0.000
	N63134	1	190.971	190.971	0	0.000
	N04648	1	1326.424	1326.424	0	0.000
	KJ5831	1	167.629	167.629	0	0.000
	R05849	5	879.943	175.989	0	0.000
	R07171	1	144.848	144.848	0	0.000
	R20112	1	93.764	93.764	0	0.000
	R20113	1	82.797	82.797	0	0.000
	R20993	3	576.895	192.298	0	0.000
	R54048	1	138.468	138.468	0	0.000
	SUBCA6	2	23504.695	11752.347	0	0.000
	SW3200	3	11433.781	3811.260	0	0.000
	W62M40	1	91.762	91.762	0	0.000
	W81A1J	2	236.126	118.063	0	0.000
	W818Y3	1	1848.000	1848.000	0	0.000
	Z11412	1	123.838	123.838	0	0.000
	Z30463	1	131.901	131.901	0	0.000
	Z34360	1	130.108	130.108	0	0.000
	Z47500	4	2884.281	721.070	0	0.000
	228	23	32635.504	1418.935	0	0.000
	229	8	9392.781	1043.642	0	0.000

DEFENSE DEPOT TRACY, CALIFORNIA
OPTIMIZED NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	DCR	TOTAL NUMBER OF LTL SHIPMENTS	TOTAL LTL WEIGHT	AVERAGE LTL WEIGHT	TOTAL NUMBER OF SHIPMENTS	TOTAL TL WEIGHT
B	3DK	2	2230.096	1115.048	0	0.000
	369104	1	1905.904	1905.904	0	0.000
	369108	1	577.247	192.416	0	0.000
	874941	3	138.919	138.919	0	0.000
	874995	3	906.674	302.225	0	0.000
	87613A	2	330.572	165.286	0	0.000
	87618A	2	310.277	155.138	0	0.000
	87618B	1	402.402	402.402	0	0.000
	876180	8	9222.598	1152.825	0	0.000
	87637A	1	159.390	159.390	0	0.000
	87643J	11	20679.750	1879.977	1	30000.000
	87643L	7	26829.219	3832.746	0	0.000
	876439	6	903.331	150.555	0	0.000
	87644G	1	76.659	76.659	0	0.000
	87644J	11	99949.875	9086.352	4	120000.000
	876440	3	953.471	318.490	0	0.000
	876459	1	178.200	178.200	0	0.000
	87650L	4	464.585	116.146	0	0.000
	87650M	2	5147.910	2573.955	0	0.000
	87650S	1	71.335	71.335	0	0.000
	876535	12	3142.699	261.892	0	0.000
	87655A	4	20108.770	5027.192	0	0.000
	87672B	7	10788.996	1541.285	0	0.000
	87672C	6	3495.523	582.587	0	0.000
	87673A	5	10860.258	2172.052	0	0.000
	87674L	3	399.839	133.280	0	0.000
	876832	2	545.795	272.897	0	0.000
	87972A	3	783.320	261.107	0	0.000
	87974D	5	1202.189	240.438	0	0.000
	87974E	2	504.019	252.009	0	0.000
	879743	1	484.439	484.439	0	0.000
	899101	2	685.608	342.804	0	0.000
	899102	2	318.010	159.005	0	0.000
SUBTOTALS		232	406152.898		5	150000.000
C	FS2040	1	7521.512	7521.512	0	0.000
	HX3618	1	1892.901	1892.901	0	0.000
	HX3630	2	2676.550	1338.275	0	0.000
	N63042	11	54578.591	4961.586	0	0.000
	R52855	1	146.223	146.223	0	0.000
	W62TFU	1	72.050	72.050	0	0.000
	W62W67	1	546.700	546.700	0	0.000
	W81AG8	1	193.600	193.600	0	0.000
	149102	2	893.838	446.919	0	0.000
	221	2	501.600	250.800	0	0.000
	87442A	3	3164.291	1054.764	0	0.000
	87442B	4	2777.119	694.280	0	0.000
	874422	16	34164.957	2135.310	0	0.000
	87443M	3	12801.520	4267.173	1	30000.000
	87443N	2	310.453	155.226	0	0.000
	87443Q	1	3831.508	3831.508	0	0.000

DEFENSE DEPOT TRACY, CALIFORNIA

OPTIMAL NUMBER OF SMALL PARCEL CARRIER SHIPMENTS BUILT

GEOGRAPHIC AREA	MODE SHIPMENT	PARCEL OF POST ZONE	NUMBER OF SHIPPING UNITS	TOTAL WEIGHT	AVERAGE WEIGHT	COST/SHIPMENT	TOTAL SHIPMENT COST
A	G	2	7	47.113	6.730	\$2.75	\$19.25
		3	14	83.897	5.993	\$2.10	\$29.40
	S	2	52	1012.726	19.476	\$5.53	\$287.56
		3	54	646.470	11.972	\$2.55	\$137.70
		8	5	111.705	22.341	\$8.48	\$42.40
B	G	1	59	975.700	16.537	\$2.75	\$162.25
		2	11	128.491	11.681	\$2.30	\$25.30
		9	110	1615.988	14.691	\$0.00	\$0.00
	S	1	377	5818.571	15.434	\$4.11	\$1,549.47
		2	86	1247.180	14.502	\$2.70	\$232.20
		3	3	45.496	15.165	\$2.16	\$6.48
		4	3	32.758	10.919	\$3.85	\$11.55
C	G	1	28	444.510	15.875	\$2.38	\$66.64
		2	18	188.056	10.448	\$2.47	\$44.46
		9	11	250.492	22.772	\$0.00	\$0.00
	S	1	110	1384.658	12.588	\$3.42	\$376.20
		2	137	1862.631	13.603	\$3.69	\$505.53
		3	53	409.486	7.726	\$4.20	\$222.60
		8	5	86.097	17.219	\$5.53	\$27.65
D	G	3	33	591.173	17.914	\$3.70	\$122.10
		9	1	1.540	1.540	\$0.00	\$0.00
	S	3	97	1400.772	14.441	\$4.84	\$469.48
E	G	3	66	704.484	10.674	\$2.82	\$186.12
		4	55	553.091	10.056	\$4.56	\$250.80
		9	107	1554.762	14.530	\$0.00	\$0.00
	S	3	124	1483.581	11.964	\$4.71	\$584.04
		4	368	4951.221	13.454	\$5.72	\$2,104.96
		9	1	0.990	0.990	\$0.00	\$0.00
F	G	4	29	256.542	8.846	\$3.78	\$109.62
		9	13	298.661	22.974	\$0.00	\$0.00
	S	4	235	2875.004	12.234	\$7.01	\$1,647.35
G	G	2	24	306.449	12.769	\$2.93	\$70.32
		9	81	750.079	9.260	\$0.00	\$0.00
	S	1	20	545.940	27.297	\$4.99	\$99.80
		2	48	526.833	10.976	\$4.19	\$201.12
H	G	2	18	102.146	5.675	\$1.95	\$35.10
		4	13	139.755	10.750	\$4.67	\$60.71
		5	10	93.181	9.318	\$6.44	\$64.40
	S	2	3	14.300	4.767	\$1.62	\$4.86
		4	278	4000.852	14.392	\$8.56	\$2,379.68
		5	203	2567.026	12.645	\$6.94	\$1,408.82
		6	19	196.889	10.363	\$8.63	\$163.97
I	G	9	483	5437.795	11.258	\$0.00	\$0.00
	S	1	46	523.050	11.371	\$3.51	\$161.46

DEFENSE DEPOT TRACY, CALIFORNIA

J	G	4	13	152.196	11.707	\$4.56	\$59.28
		5	19	222.838	11.728	\$5.40	\$102.60
		9	191	2227.566	11.663	\$0.00	\$0.00
	S	3	2	3.311	1.656	\$1.47	\$2.94
		4	257	3524.378	13.714	\$5.21	\$1,338.97
		5	455	5769.434	12.680	\$9.68	\$4,404.40
		7	8	19.844	2.481	\$2.20	\$17.60
		9	1	46.860	46.860	\$0.00	\$0.00
K	G	2	8	105.886	13.236	\$2.30	\$18.40
		4	10	87.417	8.742	\$4.44	\$44.40
		5	7	128.623	18.375	\$5.05	\$35.35
	S	2	57	676.489	11.868	\$3.60	\$205.20
		4	326	4344.120	13.326	\$6.84	\$2,229.84
		5	174	2527.382	14.525	\$9.01	\$1,567.74
		6	8	129.547	16.193	\$8.91	\$71.28
		8	1	0.110	0.110	\$1.91	\$1.91
L	G	3	34	554.696	16.315	\$3.83	\$130.22
		4	31	649.858	20.963	\$4.88	\$151.28
	S	4	127	2150.344	16.932	\$6.62	\$840.74
H	S	4	52	648.923	12.479	\$10.21	\$530.92
		5	4	51.260	12.815	\$5.21	\$20.84
N	G	5	9	164.802	18.311	\$6.75	\$60.75
		6	32	417.439	13.045	\$6.83	\$218.56
		7	10	141.647	14.165	\$10.52	\$105.20
	S	5	129	1683.176	13.048	\$4.56	\$588.24
		6	103	1104.136	10.720	\$6.38	\$657.14
		7	409	5475.888	13.388	\$17.27	\$7,063.43
O	G	5	3	0.924	0.308	\$4.00	\$12.00
	S	5	289	4160.046	14.395	\$7.80	\$2,254.20
		6	10	180.301	18.030	\$5.26	\$52.60
P	G	6	7	215.116	30.731	\$6.83	\$47.81
		7	9	229.185	25.465	\$9.65	\$86.85
	S	6	326	4510.583	13.836	\$6.67	\$2,174.42
		7	239	2711.170	11.344	\$7.26	\$1,735.14
		8	1	1.177	1.177	\$2.37	\$2.37
Q	G	5	1	4.818	4.818	\$2.59	\$2.59
		6	6	183.458	30.576	\$9.68	\$58.08
		7	12	223.575	18.631	\$10.24	\$122.88
	S	5	33	435.336	13.192	\$4.78	\$157.74
		6	133	1668.447	12.545	\$4.98	\$662.34
		7	210	2449.964	11.666	\$5.51	\$1,157.10
		8	3	29.150	9.717	\$10.16	\$30.48
R	G	8	68	910.613	13.391	\$15.35	\$1,043.80
		9	305	4926.273	16.152	\$0.00	\$0.00
	S	2	1	19.800	19.800	\$2.97	\$2.97
		7	65	676.522	10.408	\$6.57	\$427.05
		8	1104	14014.891	12.695	\$24.79	\$27,368.16
		9	2	21.175	10.588	\$0.00	\$0.00
S	G	7	6	66.682	11.114	\$7.17	\$43.02
		8	8	115.148	14.394	\$15.35	\$122.80
		9	118	1376.221	11.663	\$0.00	\$0.00

DEFENSE DEPOT TRACY, CALIFORNIA

	5	7	270	3717.989	13.770	\$7.61	\$2,054.70
		8	168	2005.707	11.939	\$9.74	\$1,636.32
T	G	8	17	223.905	13.171	\$10.22	\$173.74
		9	15	102.828	6.855	\$0.00	\$0.00
	5	8	397	5641.702	14.211	\$8.48	\$3,366.56
U	G	1	5	105.160	21.032	\$3.06	\$15.30
		7	4	88.660	22.165	\$10.24	\$40.96
		8	22	486.662	22.121	\$16.11	\$354.42
	5	7	184	2332.682	12.678	\$6.57	\$1,208.88
		8	569	6398.865	11.246	\$11.84	\$6,736.96
V	G	1	2	6.116	3.058	\$1.81	\$3.62
		8	38	400.510	10.540	\$13.09	\$497.42
		9	249	3427.644	13.766	\$0.00	\$0.00
	5	2	1	18.700	18.700	\$2.88	\$2.88
		3	4	89.397	22.349	\$3.18	\$12.72
		5	2	5.148	2.574	\$2.11	\$4.22
		8	850	10432.202	12.273	\$11.84	\$10,064.00
W	G	8	13	119.845	9.219	\$15.35	\$199.55
		9	312	3137.464	10.056	\$0.00	\$0.00
	5	1	1	6.182	6.182	\$1.80	\$1.80
		5	4	42.372	10.593	\$3.05	\$12.20
		8	588	7655.208	13.019	\$22.79	\$13,400.52
X	G	9	49	597.443	12.193	\$0.00	\$0.00
	5	9	29	341.748	11.784	\$0.00	\$0.00
Y	G	4	18	300.651	16.703	\$4.67	\$84.06
		5	4	145.244	36.311	\$5.75	\$23.00
	5	4	47	500.951	10.659	\$7.01	\$329.47
		5	108	1456.598	13.487	\$8.58	\$926.64
Z	G	5	12	220.891	18.408	\$6.60	\$79.20
	5	2	5	60.412	12.082	\$2.34	\$11.70
		5	158	2307.984	14.607	\$12.41	\$1,960.78
TOTAL			13099	170784.756			\$115,104.60

\$100,586.07 SAVINGS AT DDTC FOR A TYPICAL 45 DAY PERIOD

46.63% PER CENT SAVINGS

\$804,688.56 SAVINGS AT DDTC FOR A TYPICAL YEAR

\$4,828,131.36 SAVINGS AT ALL 6 DLA DEPOTS FOR A GIVEN YEAR

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
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12. PERSONAL AUTHOR(S) LT Stephen R. Von Hitritz, SC, USN					
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FIELD	GROUP	SUB-GROUP			
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This report summarizes the work done and conclusions reached in a study of depot low priority shipment consolidation effectiveness. IPG III requisitions for compatible items and with the same destinations are consolidated to make maximum use of transportation and warehousing funds. This process is highly automated but frequently the oldest requisition is removed from the shipment data bank before the routine drop date. The resulting consolidation is thus smaller than it would have been under ideal conditions. The model constructed for this study emulates the consolidation process. The optimization of the consolidation process assumes a perfect system but can still be a useful tool in determining effectiveness trends at the Defense Logistics Agency supply depots. For a typical depot in a 45-day period this model shows that under optimal conditions, small parcel shipments could be reduced in excess of 63 percent.					
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